Summary

This thesis is started from the observation of a collective increase in unhealthy lifestyles among large groups of people in society. This increase of an unhealthy lifestyle is associated with an increase in physical and mental health problems, which result in significant health care costs at the collective level. From the human ánd from a financial perspective, it is therefore important to develop knowledge on how large groups of people can maintain their health in today's society. In this thesis, a social change process aimed at promoting self-regulation in health is considered to be important to counteract this trend. A systems approach is presumed to be adequate to induce such a change process.

The focus in this thesis is on organisations. The main reason is that organisational (change) theories, compiling knowledge on how to induce a collective change process, are available in organisational science. In addition, the work setting gives access to a large group of people. Organisations also provide the opportunity for multi-level interventions needed for a multifactorial construct as health. Equally important, however, is that health is relevant for organisations themselves. A healthy workforce, and safe and healthy working conditions are presumed to contribute to the functioning of employees and the organisations as a whole. Consequently, Workplace Health Promotion (WHP) has become more common. WHP, however, is often not as effective as intended. There is a need for knowledge on how to promote health within organisations more effectively.

With a focus on organisations, this thesis fits the tradition of research on work and health. More specifically, the focus in this thesis is on *organisational* health interventions. Organisational health interventions, as contrasted by individual interventions, focus on health-promoting organisational features. On the other hand, individual health interventions primarily focus on health or health behaviour of individual employees. In this thesis, organisational health interventions are presumed to be specifically relevant to induce a collective health-promoting change process.

Organisational health interventions are seen as complex innovations, which are difficult to develop, apply and evaluate both from content and methodological reasons. A major aim of

this thesis is therefore to contribute to knowledge about how to develop, apply and evaluate organisational health interventions effectively. An important principle that has been applied is that organisations will be only interested in health interventions if there is a business relevance. Figure 1 shows the model that has been used for this purpose. Organisational health interventions are primarily aimed at developing health-promoting organisational features. These organisational features are expected to contribute to a) organisational development and functioning of the organisation as a whole, and b) employees' health, which, in turn, may contribute to employees' performance and productivity. If properly designed, organisational health interventions therefore potentially serve both a health and a business interest. In literature, for example, such a parallel interest is attributed to organisational social capital. Organisational social capital is a cultural dimension consisting of collaboration, mutual trust and justice. From health science perspective, social capital is mainly regarded as a health-promoting context. From an organisational perspective, social capital is seen as a characteristic of the organisation itself; a part of the organisation's identity with a significant impact on the company image, the interaction with the environment and the functioning of the organisation as a whole.
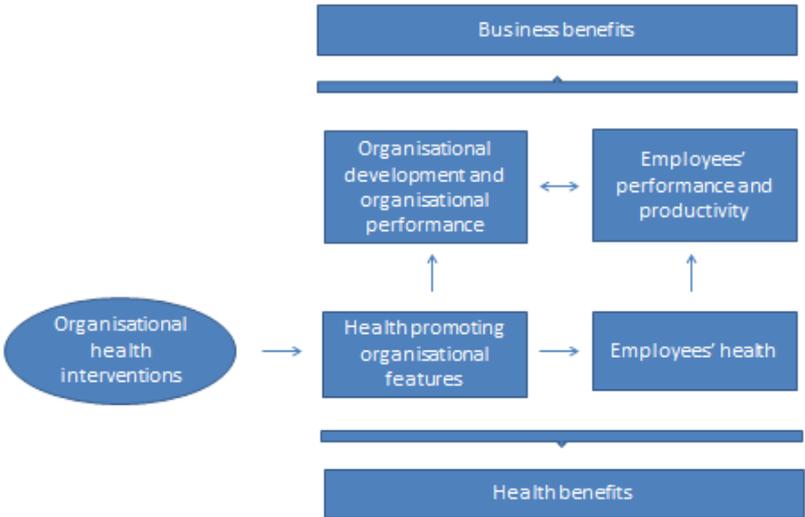

Figure 1: Organisational health interventions and the presumed health and business benefits

Coming forth from the from the idea that inducing a change process that fosters self-regulation in health in organisations makes sense from both a health and a business

perspective, and the observation that that there are still many improvements possible in organisational health interventions, the study aimed at:

1) Contributing to knowledge on how to induce a change process that fosters self-regulation in health in organisations,
2) Contributing to more effective health promotion in organisations,
3) Contributing to knowledge on how to develop, apply and evaluate an organisational health intervention aimed at promoting social capital and self-regulation in health in organisations.

The main objectives were:

1) to examine the parallel health and business interest of organisational health interventions, and to provide an insight into *how* this parallel interest can be served simultaneously,
2) to provide an insight into the various ways in which health can be meaningfully embedded within organisations,
3) to investigate how to develop an organisational health intervention, to apply such an intervention and to examine its effectiveness on social capital and self-regulation in health.

The first objective is described in Part 1 of this thesis (Chapter 2-4), the second objective is described in Part 2 (Chapter 5-7) and the third objective is described in Part 3 of this thesis (Chapter 8-9). In Chapter 10 the main findings of this thesis are summarised and discussed.

Part 1: Examining the parallel health and business interest of organisational health interventions

Chapters 2 through 4 confirm the importance of health for the performance of employees. In these chapters, employees' health and vitality at work are found to be significantly associated with employees' performance, expressed as absenteeism, presenteeism (being at work, but hindered by health complaints) and effective personal functioning. Table 1 describes the significant associations found between health indicators and employees' performance.

Table 1. Significant negative (↓) and positive (↑) associations found between health indicators and employees' performance

Health indicators	Employees' performance		
	Absenteeism	Presenteeism	Effective personal functioning
- Perceived health (good)	↓ [3,4]	↓ [3,4]	↑ [3]
- Vitality at work (high level)	ns	↓ [4]	↑ [2]
- Emotional exhaustion (high level)	↑ [3]	↑ [3]	↓ [3]

ns: no significant association found, 2: significant association found in Chapter 2, 3: significant association found in Chapter 3, 4: significant association found in Chapter 4.

The findings also indicate that if organisations primarily want to reduce absenteeism, a focus on health is more relevant than a focus on vitality at work. When it comes to effective functioning of employees, health and vitality at work appear both of interest.

Chapters 2 through 4 also provide insights into *how* a parallel health and business interest can be served. Chapter 2 confirms that vitality at work is a multifactorial construct. Vitality at work appears positively associated with lifestyle (physical activity and healthy diets), with basic psychological needs for self-determination (autonomy and competences), and with organisational cultural factors (organisational social capital and a balanced work style). Based on these findings, a healthy lifestyle among employees is relevant for vitality at work. In addition, organisational culture appears an important *organisational feature* for vitality at work. Not only a direct association between organisational cultural factors and vitality at work is found; also the fulfilment of the basic psychological needs requires a supportive social environment. Organisational culture may thus also indirectly influence vitality at work, by providing a social context in which the basic needs for self-determination are fulfilled.

Chapter 3 focuses on one specific dimension of organisational culture: organisational social capital. Organisational social capital includes the aspects collaboration, trust and justice. Chapter 3 shows the relevance of organisational social capital for employees' health. In particular *bonding* social capital, a horizontal component of social capital that is experienced between employees who are equal in terms of social identity, appears relevant for

employees' health. The interaction between colleagues therefore should be seen as an important cultural aspect for employees' health. This finding is a meaningful addition to knowledge and research into a health-promoting organisational culture, which is mainly focused on the facilitating role of leaders. It is concluded that in order to improve health, leaders and employees themselves do also well to encourage good collaboration, mutual trust and justice.

In **Chapter 4**, Self-Determination Theory (SDT, Ryan and Deci 2000) was used as a theoretical foundation for examining self-regulatory capacity among employees. More specifically, a sub-theory of SDT was used, namely the Organismic Integration Theory (OIT). Chapter 4 describes the association between motivational regulatory styles and various aspects of a healthy lifestyle and work style. Autonomous regulation, i.e. in accordance with personally endorsed values, goals and needs, was found to be associated with various forms of a healthy lifestyle and work style. The findings indicate that autonomous regulation is underlying various types of health behaviours, both lifestyle and work style. The study supports the idea of transference or 'spill-over' effects between autonomous regulation and various types of health behaviour among employees. Based on this study it is concluded that the internalising of the value of health is important to improve various health behaviours among employees.

Based on the three studies in Part 1 of this thesis, organisational culture, in particular (bonding) social capital, as well as internalising of the value of health are identified as key objectives of organisational health interventions aimed at fostering self-regulation in health.

Part 2: Embedding health within companies

Chapter 5 describes a 'value case' for health management within an organisation. A value case describes the investments and broad returns of a change process from the perspective of all stakeholders. A value case, as compared to a business case, is a broader investigation for it maps the full value of a change process from the perspective of all stakeholders and for the whole system. The value case in Chapter 5 a) showed a plausible relationship between organisational development and health promotion for this particular organisation, and b) created a situation in which stakeholders themselves assigned value to the change process and showed an active commitment for the change process. A value case fits the recently

increased focus on value orientation in health promotion. In the literature, making explicit the broad value of health is presumed to contribute to decision-making in favour of health, which potentially contributes to healthier behaviours and an increase of health. However, this value-oriented methods are still in their infancy. Especially the generic characteristics for a value case described in Chapter 5 seem meaningful to set up future value-oriented studies and evaluations.

The underlying idea in **Chapter 6** was that health can be embedded within organisations by incorporating health indicators in management control. Management control is primarily aimed at supporting good decision making processes by managers. Management and organisational literature shows that decision making processes are based on a combination of both tangible and intangible indicators. The importance of inclusion of intangibles in management control is acknowledged in management literature. Chapter 6 describes tangible and intangible indicators for workplace health promoting, which were derived from the literature and combined with practical experiences from four front runner companies in the Netherlands on health management. However, even in the front runner companies involved, the identified indicators were neither well defined nor well managed. A potential useful way to embed health within organisations therefore still remains underutilized.

Chapter 7 describes a literature study on the core values that support health, safety and well-being at work. The rationale of Chapter 7 was that organisations increasingly set their 'core values' to express their corporate identity and to give direction to their way of doing. Based on literature, values that are underlying health, safety and well-being in organisations were identified. From the perspective of business ethics and Corporate Social Responsibility (CSR) these values could be used to develop a desired organisational identity. At the same time, these values are supporting employees' health, safety and well-being. It has been argued that the application of these values enables a stronger connection between a health-promotion culture and the general organisational culture. As organisational identity and core values, as opposed to health, are often primary concerns of the management, a sustained attention to the identified core values seem feasible, while employees' health will be promoted simultaneously.

Based on the Chapters 5 through 7, it was concluded that a broad value orientation on health within organisations and the use of intangibles are important to embed health within organisations.

Part 3: Developing, applying and evaluating an organisational health intervention

The third part of this thesis is focused on the development, application and evaluation of organisational health interventions. **Chapter 8** describes a Delphi procedure which was conducted to identify relevant organisation-specific factors for developing of health interventions in organisations. To facilitate practical use, the identified factors were elaborated suitable to the Intervention Mapping protocol (Bartholomew et al 2011), which was called 'Organisational Mapping' (OM). OM contributes to a thorough understanding of the organisation as an entity, and therefore can be used as a preparatory stage before developing an intervention. However, OM can also be a worthwhile health intervention in itself. OM encourages relevant stakeholders to collaborate, and to share their views, interests, commonalities and differences. Also, a shared decision making process is stimulated. With this OM contributes to obtain commonality for the change process and encourages stakeholders to actively participate in the change process.

Chapter 9 describes the development, application and evaluation of an organisational intervention aimed at promoting social capital and self-regulation in health. By using an organisation-specific application of the Intervention Mapping protocol (Bartholomew et al 2011), an organisational Large- Scale-Intervention (Van der Zouwen 2011) was applied and evaluated in a Dutch dairy company. The intervention is found to be effective on bonding social capital, and on openness towards health and vitality at work between managers and employees and among employees. The intervention also appears effective on healthy dietary habits, smoking and on sustainable employability. The sensitivity analyses show that the effects are particularly attributable to the dialogue component of the intervention. This is consistent with the few other studies on the effectiveness of dialogue for health promotion. In safety science there is more evidence for the usefulness of dialogue and interaction for the development of a safety culture. Based on the findings in this thesis, and the fact that health and safety in organisations have much in common, it is concluded that

reflective dialogue is a meaningful intervention component of organisational health promotion.

Chapter 10 provides a summary of the results and describes the general discussion. Three main insights that emerge from this thesis are addressed specifically: a) the relevance of organisational social capital, b) insights regarding self-regulation at the organisational and at the individual level and c) insights regarding the methodical development of organisational health interventions: Organisational Mapping.

The findings on <u>social capital</u> described in the various chapters of this thesis are gathered. The proposition that organisational social capital may serve a parallel health and business interest is substantiated both from a theoretical and from an practical perspective. Additionally, there is support from the analyses that have been done on the data on social capital from the dairy company. Since reflective dialogue on the value of health appears to contribute to bonding social capital (Chapter 9), dialogue on issues that really matter, via organisational social capital, is expected to improve business excellence and at the same time to promote the health of large groups of individuals.

This thesis provides insights into <u>self-regulation</u> on the organisational and on the individual level. At the organisational level, and in line with collective learning theories, this thesis shows the relevance of a proper intervention development in which stakeholders themselves shape the intervention. Participatory approaches as applied in the value case methodology (Chapter 5) and Large-Scale-Interventions (Chapter 9) are significant practical examples of inducing self-regulatory processes at the collective level. At the individual level, the internalisation of the value of health appears an important self-regulating factor for various types of health behaviours among employees. Interventions aimed at internalising the value of health are considered worthwhile to promote various forms of health behaviours among employees. It has been observed that this is a different approach than addressing risks and research on determinants of health risks that is often applied in WHP.

<u>Organisational Mapping</u> (OM) has been elaborated to specifically support the development of organisational health interventions. OM facilitates a proper developmental process and encourages health promoters to use relevant organisation-specific factors and organisational

theories in the development process. Therefore, it is presumed that OM provides the key ingredients for the development of effective organisational health interventions.

Chapter 10 concludes with the insights obtained on how to induce a change process that fosters self-regulation in health in organisations. A broad value orientation on health in organisations and the use of intangibles are relevant. Finally, this thesis supports the idea to complement the today's prominent focus on the physical and mental health of employees with the 'social dimensions of health' and with developing a healthy organisation. Essential elements of WHP that emerge from this thesis are working at higher levels of organisational social capital and self-regulation in health at both the organisational and individual level. These elements of the healthy organisation are presumed to contribute to the health and function of both employees and the organisation as a whole. With a workforce of over 7 million people in the Netherlands this potentially contributes to the promotion of health of large groups of people.